

Supplemental Material

Air Pollution Exposure and Abnormal Glucose Tolerance during Pregnancy: The Project Viva Cohort

Abby F. Fleisch, Diane R. Gold, Sheryl L. Rifas-Shiman, Petros Koutrakis, Joel D. Schwartz, Itai Kloog, Steven Melly, Brent A. Coull, Antonella Zanobetti, Matthew W. Gillman, and Emily Oken

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Table S1. Correlations between exposures (Spearman r).

Exposure	PM _{2.5} central-site	PM _{2.5} spatio- temporal	Black carbon central-site	Black carbon spatio- temporal	Traffic density	Roadway proximity
PM_{2.5}						
Central-site	1					
Spatiotemporal	0.79	1				
Black carbon						
Central-site	0.24	0.19	1			
Spatiotemporal	0.08	0.39	0.36	1		
Traffic density	-0.002	0.16	-0.03	0.50	1	
Roadway proximity	0.01	-0.19	0.01	-0.34	-0.38	1

Table S2. Characteristics of participants with^a and without imputed data and with and without spatiotemporal PM_{2.5} exposure data.

	Mean ± SD or % with imputation	N without imputation	Mean ± SD or % without imputation	N with PM _{2.5} data	Mean ± SD or % with PM _{2.5} data	N without PM _{2.5} data	Mean ± SD or % without PM _{2.5} data	p-value
Maternal age at enrollment (years)	31.8 ± 5.2	2,093	31.8 ± 5.2	1,584	31.9 ± 5.2	509	31.4 ± 5.4	0.07
Prepregnancy BMI (kg/m²)	24.9 ± 5.6	2,078	24.9 ± 5.5	1,574	24.8 ± 5.4	504	25.1 ± 6.0	0.34
Pregnancy weight gain to OGTT (kg)	10.2 ± 4.4	2,023	10.2 ± 4.4	1,556	10.3 ± 4.4	467	10.2 ± 4.3	0.66
Central-site PM_{2.5} (µg/m³)	N/A	1,943	10.9 ± 1.4	1,466	11.2 ± 1.4	477	10.2 ± 1.2	<0.001
Spatiotemporal PM_{2.5} (µg/m³)	N/A	1,584	11.9 ± 1.4	1,584	11.9 ± 1.4	N/A	N/A	
Central-site black carbon (µg/m³)	N/A	1,943	0.9 ± 0.1	1,466	0.8 ± 0.1	477	0.9 ± 0.1	<0.001
Spatiotemporal black carbon (µg/m³)	N/A	2,069	0.7 ± 0.2	1,571	0.7 ± 0.2	498	0.8 ± 0.3	<0.001
Traffic density [(vehicles/day) x km]	N/A	2,081	1,621 ± 2,234	1,574	1,625 ± 2,198	507	1,608 ± 2,344	0.89
Roadway proximity (≤ 200 m)	N/A	2,092	13%	1,583	13%	509	14%	0.92
College graduate	65%	2,069	65%	1,570	66%	499	62%	0.16
Race/ethnicity		2,069		1,570		499		
White	67%		67%		67%		66%	0.11
Black	17%		16%		16%		19%	
Asian	6%		6%		6%		6%	
Hispanic	7%		7%		8%		5%	
Other	4%		4%		4%		4%	
Family history of diabetes	8%	1,719	7%	1,325	8%	394	7%	0.61
Prior history of gestational diabetes		2,063		1,565		498		0.27
Yes	2%		2%		2%		2%	
No	50%		50%		51%		46%	
Nulliparous	48%		48%		48%		51%	
Glucose tolerance		2,050		1,574		476		0.86
GDM	6%		6%		55%		6%	
IGT	3%		3%		3%		3%	
Failed GCT/normal OGTT	9%		9%		9%		9%	
Normal	83%		83%		83%		82%	

^aOnly covariates and outcomes were imputed. N = 2,093 for all imputed data.